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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,123	01/09/2004	James R. Bailey	2003-0270.02	8456

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EXAMINER	
TSAI, TSUNG YIN	
ART UNIT	**PAPER NUMBER**
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/754,123	BAILEY, JAMES R.	
	Examiner	Art Unit	
	Tsung-Yin Tsai	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☒ Claim(s) *1-32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/19/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

(1) The format of the applications requires the separation of the specification and the claim. The submitted application has the claims in the same page at the end of the specification. Please separate the two by ending the specification without the start of the claim and the claim starts on the separate page.

Claim Objections

2. Claims 1-32 are objected to because of the following informalities:

(1) Regarding claim 1, lines 6 where cited "image scanning area having a detected" replace with "image scanning area having the detected."

(2) Regarding claim 7, line 2 where cited "area tagged as having a defect if that" replace with "area tagged as having the defect if that."

(3) Regarding claim 8, line 2 where cited "scanning area tagged as having a defect if that section" replace with "scanning area tagged as having the defect if that section."

(4) Regarding claim 11, lines 2 where cited "as having a defect is ignored" replace with "as having the defect is ignored.".

(5) Regarding claim 12, line 2 where cited "scanning area tagged as having a defect" replace with "scanning area tagged as having the defect."

(6) Regarding claim 22, line 2 where cited "tagged as having a defect" replace with "tagged as having the defect."

(7) Regarding claim 23, line 2 where cited "tagged as having a defect" replace with "tagged as having the defect."

(8) Regarding claim 24, line 2 where cited "tagged as having a defect" replace with "tagged as having the defect."

(9) Regarding claim 25, line 2 where cited "tagged as having a defect" replace with "tagged as having the defect."

(10) Regarding claim 10, line 2 where cited "having a defect" replace with "having the defect."

Claim Rejections – 35 USC 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5-6, 7-9, 12, 14, 18-22, 25, 27, 29-30 and 32 are rejected under 35 U.S.C. 102(b) as being unpatentable over Denber (US Patent Number 5,214,470).

Denber discloses the following method and apparatus (figure 1, column 2 lines 40-67):

(1) Regarding claims 1 and 14:

performing a defect calibration scan of an image scanning area (figure 2, column 1 lines 30-67. Scan is done with out the document in place. This is the defect calibration scan.);

analyzing data produced from the defect calibration scan to detect at least one defect in at least one section of the image scanning area (figure 2, column 1 lines 30-67. Creation of black and white bitmap is the result of the analysis.); and

generating a tag for each section of the image scanning area having a detected defect (figure 2, column 1 lines 30-67, column 2 lines 1-10. Bitmap creation with the black and white pixel are creation of the tags. Location determination is also the tag creation.).

(2) Regarding claims 5 and 18:

further comprising automatically compensating for the defect based on information contained within the tag (figure 8a-8d, figure 7, figure 9, column 3 and 4. The spiral region technique is the method that take the given information and corrects it.).

(3) Regarding claims 6 and 19:

further comprising determining the nature of the defect by recursively dividing the section of the image scanning area tagged as having a defect into subareas and analysis each subarea in detail (figure 8a-8d, figure 7, figure 9, column 4 lines 1-10. The figures show that the defect in the area is divided. Pixel , which are the smallest division of the image, are than analysis one by one.).

(4) Regarding claims 7 and 20:

further comprising determining whether the section of the image scanning area tagged as having a defect is included in a target image region (figure 2, figure 5, figure 6, column 2 lines 1-10, column 3 lines 35-45.).

(5) Regarding claims 8 and 21:

further comprising ignoring the section of the image scanning area tagged as having a defect if that section is determined not to be included in the target image region (figure 2, figure 5, figure 6, column 2 lines 1-10, column 3 lines 55-65).

(6) Regarding claims 9 and 22:

wherein the section of the image scanning area tagged as having a defect is ignored in autofitting the target image to the image scanning area (figure 2, figure 5, figure 6, column 2 lines 1-10, column 3 lines 55-65).

(7) Regarding claims 12 and 25:

further comprising smoothing over the section of the image scanning area tagged as having a defect if that section is determined to be included in the target image region (figure 2, figure 5, figure 6, column 2 lines 1-10, columns 3-4).

(8) Regarding claim 27:

wherein the analyzer and the tag generator are included in the image scanning device (column 3 lines 40-67 to column 4 lines 1-25).

(9) Regarding claim 29:

wherein the compensator is included in the image scanning device (column 3 lines 40-67 to column 4 lines 1-25, figure 8a-8d, figure 7, figure 9, column 3 and 4. The technique is the compensator).

(10) Regarding claim 32:

wherein the compensator is included in a host computer connected to the image scanning device (column 3 lines 40-67 to column 4 lines 1-25, figure 8a-8d, figure 7, figure 9, column 3 and 4. The compensator is within the hardware.).

(11) Regarding claim 30:

wherein at least one of the analyzer and the tag generator are included in a host computer connected to the image scanning device (column 3 lines 40-67 to column 4 lines 1-25, figure 8a-8d, figure 7, figure 9, column 3 and 4. All of the hardware are within the host processor.).

Claim Rejections – 35 USC 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-4,10-11, 15-17, 23-24, 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denber (US Patent Number 5,214,470) in view of Peairs et al (US Patent Number 5,694,228).

Denber discloses all that is above except the following:

(1) Regarding claims 2 and 15:

wherein the defect calibration scan data is performed on the occurrence of at least one of the group of events comprising when the image scanning device is powered up upon request by a user, and periodically.

Peairs et al in the same field of endeavor disclose wherein the defect calibration scan data is performed on the occurrence of at least one of the group of events comprising when the image scanning device is powered up upon request by a user, and periodically (figure 1, figure 2, column 2 lines 5-20, column 3 lines 45-55).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber to scan the defect calibration scan data is performed on the occurrence of at least one of the group of events comprising when the image scanning device is powered up upon request by a user, and periodically. Such that tags database would be readily up-to-date and would be ready to be use any time that is requested.

(2) Regarding claims 3 and 16:

further comprising storing the tag.

Peairs et al in the same field of endeavor disclose further comprising storing the tag (figure 1, figure 2, column 2 lines 5-15, column 2 lines 35-40, column 4 table 1, figure 7, figure 9.).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber to further comprising storing

the tag. Such that the detection will know the location and tags database would be readily up-to-date and would be ready to be use any time that is requested.

(3) Regarding claims 4 and 17:

further comprising repeating the steps of performing the defect calibration scanning, analyzing defect calibration scan data to detect for a new defect and a change in any previously detected defect, generating and storing a tag for each new detected defect, and updating the stored tag for each previously detected defect that has changed.

Peairs et al in the same field of endeavor disclose further comprising repeating the steps of performing the defect calibration scanning, analyzing defect calibration scan data to detect for a new defect and a change in any previously detected defect, generating and storing a tag for each new detected defect, and updating the stored tag for each previously detected defect that has changed (figure 1, figure 2, column 2 lines 10-20, column 3 lines 45-55. New defects are noted and their location and values are store and update to the tag database.).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber further comprising repeating the steps of performing the defect calibration scanning, analyzing defect calibration scan data to detect for a new defect and a change in any previously detected defect, generating and storing a tag for each new detected defect, and updating the stored tag for each previously detected defect that has change.

Such that tags database would be readily up-to-date and would be ready to be use any time that is requested.

(4) Regarding claims 10 and 23:

wherein the section of the image scanning area tagged as having a defect is ignored in cloning the target image to produce multiple target images over the image scanning area.

Peairs et al in the same field of endeavor disclose wherein the section of the image scanning area tagged as having a defect is ignored in cloning the target image to produce multiple target images over the image scanning area (figure 1, figure 2, column 3 lines50-67 to column 4 lines 1-2. Office copier is the "cloner" that will output the multi image ignoring the defect area.).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber wherein the section of the image scanning area tagged as having a defect is ignored in cloning the target image to produce multiple target images over the image scanning area. Such would be the efficiency and faster way of making copies of the target image.

(5) Regarding claims 11 and 24:

wherein the section of the image scanning area tagged is having a defect is ignored in enlarging the target image to fit across multiple image scanning areas.

Peairs et al in the same field of endeavor disclose wherein the section of the image scanning area tagged is having a defect is ignored in enlarging the

target image to fit across multiple image scanning areas (figure 1, figure 2, column 3 lines50-67 to column 4 lines 1-2. Copier not only have the ability to copy, but also edit and change the image, in this case enlarging or blow up the image from original size.).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber wherein the section of the image scanning area tagged is having a defect is ignored in enlarging the target image to fit across multiple image scanning areas. Such would be a cumulative feature for the user who would want the flexibility and adaptability from one machine.

(6) Regarding claim 28:

wherein the memory is included in the image scanning device.

Peairs et al in the same field of endeavor disclose wherein the memory is included in the image scanning device (figure 1, figure 2).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber wherein the memory is included in the image scanning device. Such that the design would be cumulative feature and such feature of including memory within would make the process faster.

(7) Regarding claim 31:

wherein the memory is included in a host computer connected to the image scanning device.

Peairs et al in the same field of endeavor disclose wherein the memory is included in a host computer connected to the image scanning device (figure 1, figure 2).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber wherein the memory is included in a host computer connected to the image scanning device. Such that the design would be cumulative feature and such feature of including memory within would make the process faster.

7. Claims 13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denber (US Patent Number 5,214,470) in view of Xu et al (US Patent Number 5,761,336).

Denber discloses all that is above except the following:

(1) Regarding claims 13 and 26:

wherein the defect calibration scan is a low resolution.

Xu et al in the same field of endeavor disclose wherein the defect calibration scan is a low resolution (figure 1, column 4 lines 10-42, column 5 lines 65-67 to column 6 lines 1-10.)

It would have been obvious to one skill in the art at the time of the invention to employ Xu et al teaching to Denber wherein the defect calibration scan is a low resolution. Such the defect calibration scan will a quick update for

the tag database and low resolution scanning would increase depth of focus providing superior defect detection and classification.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gauthier (US Patent Number 6,122,065) disclose apparatus and method for detecting surface defects.

Kinjo (USPG_PUB 2002/0015514 A1) disclose Image processing method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tsung-Yin Tsai whose telephone number is (571) 270-1671. The examiner can normally be reached on Monday - Friday 8 am - 5 pm ESP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tsung-Yin Tsai
February 16, 2007

SHUWANG LIU
SUPERVISORY PATENT EXAMINER